

Rajiv Gandhi University of Health Sciences, Karnataka

VIII Semester B. Pharm Degree Examination – 29-May-2024

Supply

Time: Three Hours

Max. Marks: 75 Marks

BIOSTATISTICS AND RESEARCH METHODOLOGY

Q.P. CODE: 5033

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

All the Questions are compulsory

LONG ESSAYS

2 x 10 = 20 Marks

1. Discuss the protocol for an experimental study design.

OR

Explain 't' test. Find if there is statistical significance in the serum digoxin level in the given data:- Critical value = 2.31 ($p < 0.05$)

Serum digoxin level(mcg/ml)	1	2	3	4	5	6	7	8	9
After 4 hrs	1.0	0.9	1.0	1.3	1.0	1.3	0.9	1.1	1.0
After 8 hrs	1.0	0.7	1.0	1.2	0.9	1.3	0.8	1.0	1.0

2. What are measures of dispersion? Explain their significance with suitable examples.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Explain correlation, types of correlation and its applications.

OR

Explain null hypothesis, type I and type II errors.

4. Discuss with examples measures of central tendency.

OR

Discuss the sampling methods in research study.

5. Explain probability and its significance in statistical analysis.

6. Explain regression analysis to assess the influence of independent variable on continuous variable.

7. Explain the hypothesis testing using one way of ANOVA.

8. Describe the various graphical methods of representing quantitative data.

9. Explain cohort study.

SHORT ANSWERS

10 x 2 = 20 Marks

- Sample size calculation for confidence interval.
- Power of a study.
- Pharmaceutical examples for data analysis using SPSS.
- Factorial design.
- Degrees of freedom.
- Report writing in research study.
- Assumptions in chi square test.
- Confidence interval.
- Characteristics of Normal distribution data.
- Applications of nonparametric tests.
